UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,453	03/31/2004	Ricardo E. Gonzalez	PA2718US	7783

22830   7590   04/17/2008
CARR & FERRELL LLP
2200 GENG ROAD
PALO ALTO, CA 94303

EXAMINER
MCLEOD, MARSHALL M

ART UNIT	PAPER NUMBER
2157	

MAIL DATE	DELIVERY MODE
04/17/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
	10/815,453	GONZALEZ ET AL.
Office Action Summary	Examiner	Art Unit	
	MARSHALL MCLEOD	2157	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>31 March 2004</u>.
2a) ☐ This action is FINAL.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☐ Claim(s) _____ is/are pending in the application.
　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1-26</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☒ Claim(s) <u>27-80</u> are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on <u>31 March 2004</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
　　a) ☐ All   b) ☐ Some * c) ☐ None of:
　　　1. ☐ Certified copies of the priority documents have been received.
　　　2. ☐ Certified copies of the priority documents have been received in Application No. _____.
　　　3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date <u>6/28/207, 6/08/2007, 7/28/2006, 4/28/2005</u>.

4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

U.S. Patent and Trademark Office
PTOL-326 (Rev. 08-06)　　　　　　　　　**Office Action Summary**　　　　　　　　Part of Paper No./Mail Date 20080407

DETAILED ACTION

1.   Claims 1-26 are pending in this application.

Election/Restrictions

2.   Claims 1-26 were elected without traverse by applicant during a telephone conversation

on 28 February 2008. Claims 27-80 were not elected.

Claim Objections

3.   The following claims are objected to for a lack of antecedent basis:

"the data", claim 1 (line 8); "the destination network interface", claim 1 (line 10).

"the destination processing element", claim 1 (line 12); claim 2 (line 2); claim 3 (line 2).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   **Claims 1-6, 8-10, 12-19, 21-23, and 25-26 are rejected under 35 U.S.C. 103(a) as**

being unpatentable over Isfeld et al. (Patent No US 5,828,835), hereinafter Isfeld, in view of

Hagsand et al. (Patent No US 7,254,142 B2), hereinafter Hagsand and further in view of

Deri et al. (Patent No US 5,943,150), hereinafter Deri.

6.   With respect to claim 1, Isfeld discloses a method of communicating between a plurality

of processing nodes (Column 1, line 60), the method comprising: accepting the channel in the

destination processing node Column 3, lines 1-4); allocating a transmit buffer for the channel in

the source processing node (Column 4, lines 29-35; i.e. messages to be transmitted on the

connectionless communication link can be interpreted as allocating a transmit buffer for the

channel); allocating a receive buffer for the channel in the destination processing node (Column

4, lines 11-17); in a source processing element (Column 2, lines 63-67 continued through to

Column 3, lines 1-4), writing data to the transmit buffer for the channel (Column 3, lines 40-45);

in a source network interface (Column 12, lines 11-18), transmitting the data from the transmit

buffer of the source processing node over the channel (Column 2, lines 40-45); in the destination

network interface (Column 8, lines 50-52), receiving the data into a receive buffer for the

channel in the destination processing node (Column 4, lines 11-17); and in the destination

processing element, receiving the data from the receive buffer (Column 4, lines 11-17).

Isfeld does not disclose generating a channel that has bandwidth requirement. However,

Hagsand discloses generating a channel that has bandwidth requirement (Column 3, lines 42-43).

It would have been obvious to a person having ordinary skill in the art at the time of the

invention to modify the teachings of Isfeld with the teachings of Hagsand in order to speed u or

reduce the transfer of data by specifying that the system bandwidth meet certain requirements.

The combination of Isfeld and Hagsand does not disclose a channel that is uni-directional from a source processing node to a destination processing node. However, Deri discloses a channel that is uni-directional from a source processing node to a destination processing node (Column 3, lines 2-9). It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the combined teachings of Isfeld and Hagsand with the teachings of Deri, in order to limit bandwidth usage by restricting the traffic that travels through each channel to one direction only.

7.   With respect to claims 2 and 15, Isfeld discloses wherein the channel is associated with a first task executing on the source processing element and a second task executing on the destination processing element (Column 12, lines 49-57).

8.   With respect to claims 3 and 16, Isfeld discloses wherein the channel is associated with a first port in the source processing element and a second port in the destination processing element (Column 41; Claim 41, lines 21-32).

9.   With respect to claims 4 and 17, Isfeld discloses the size of buffers (Column 20, lines 12-18). Isfeld does not disclose wherein the channel has a maximum number. However, Hagsand discloses wherein the channel has a maximum number (Column 4, lines 17-24).

10.   With respect to claims 5 and 18, Isfeld does not disclose reserving intermediate resources for the channel based on the bandwidth requirements. However, Hagsand discloses reserving

intermediate resources for the channel based on the bandwidth requirements (Column 4, lines 25-31).

11.   With respect to claims 6 and 19, Isfeld does not disclose guaranteeing bandwidth based on the bandwidth 5 requirements using time division multiplexing. However, Hagsand discloses guaranteeing bandwidth based on the bandwidth 5 requirements using time division multiplexing (Column 2, lines 38-44).

12.   With respect to claims 8 and 21, Isfeld discloses polling a plurality of channels to check if data is received into the receive buffer for the channel (Column 12, lines 44-50; i.e. …hardware keeps state information which can be interpreted that the hardware checks if the channel has received data i.e. polling).

13.   With respect to claims 9 and 22, Isfeld discloses freeing the transmit buffer (Column 34, lines 52-54).

14.   With respect to claims 10 and 23, Isfeld discloses freeing the receive buffer (Column 38; Claim 11, line 36).

15.   With respect to claims 12 and 25, Isfeld discloses receiving a pointer for the data in the receive buffer into the destination processing element and wherein receiving the data from the receive buffer is based on the pointer (Column 12, lines 40-48).

16.   With respect to claims 13 and 26, Isfeld discloses wherein a time for a receive call in the
destination processing element does not depend upon a size of the data (Column 2, line 40-50).

17.   **Claims 7 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over
Isfeld, in view of Plante (Pub. No US 2004/0208602 A1).**

18.   With respect to claims 7 and 20, Isfeld does not disclose guaranteeing bandwidth based
on the bandwidth requirements using spatial division multiplexing. However, Plante discloses
guaranteeing bandwidth based on the bandwidth requirements using spatial division multiplexing
(Page 18; [0210], lines 1-8). It would have been obvious to a person having ordinary skill in the
art at the time of the invention to modify the teachings of Isfeld with the teachings of Plante in
order to transmit independent and separately encoded data signals using the current channel and
specified bandwidth requirement put in place.

19.   **Claims 11 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over
Isfeld, in view of Pitts (Patent No US 6,505,241 B2).**

20.   With respect to claims 11 and 24, Isfeld does not disclose destroying the channel.
However, Pitts discloses destroying the channel (Column 30, line 32).

Conclusion

21.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to MARSHALL MCLEOD whose telephone number is (571)270-

3808. The examiner can normally be reached on Monday - Thursday 6:30 a.m-4:00 p.m..

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

        Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Marshall McLeod   4/14/2008

/Ario Etienne/
Supervisory Patent Examiner, Art Unit 2157